

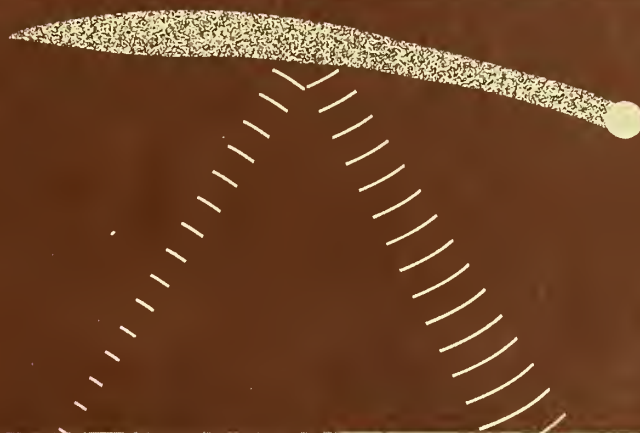
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# **WATER SUPPLY OUTLOOK FOR OREGON**



**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**

Collaborating with

**OREGON DEPARTMENT OF WATER RESOURCES**

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF  
**JAN. 1, 1978**

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*COVER PHOTO: SOME OF THE DATA IN THIS REPORT HAVE BEEN RECEIVED THROUGH THE SOIL CONSERVATION SERVICE'S NEW SNOTEL SYSTEM WHICH TRANSMITS INFORMATION VIA THE SPACE AGED METEOR BURST METHOD FROM DATA SITES TO MASTER STATIONS LIKE THESE.*

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



# ***WATER SUPPLY OUTLOOK FOR OREGON***

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued*

JANUARY 8, 1978

*Issued by*

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*In Cooperation with*

OREGON  
DEPARTMENT  
OF  
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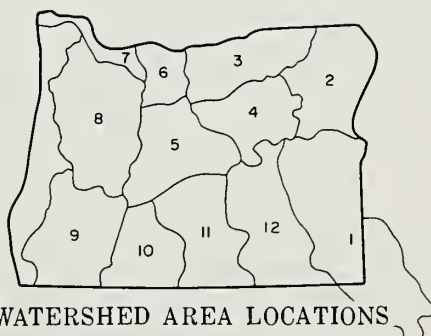
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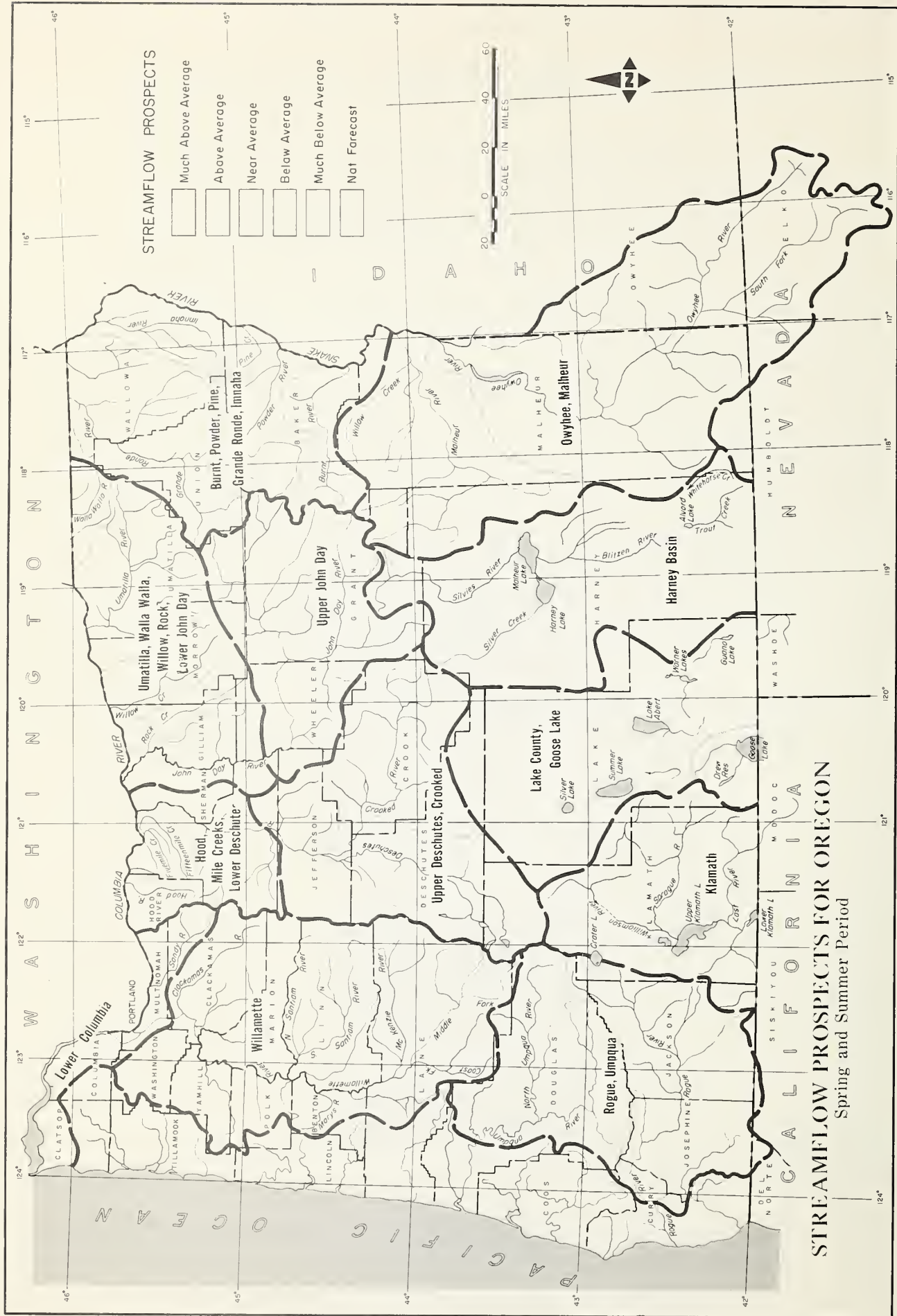
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LIST OF COOPERATORS.....INSIDE BACK COVER



WATERSHED AREA LOCATIONS





# WATER SUPPLY OUTLOOK for OREGON

JANUARY 1, 1978

Early season snow surveys indicate water users may have from below average, to near normal water supplies this next year. The mountain snowpack is near normal in the southeastern half of the state and below average in the northwestern half. Reservoir storage, in the principal irrigation reservoirs, is mostly below normal for January 1.

## SNOW COVER

The mountain snow cover is generally about normal for January 1, south of a line running from around Klamath Falls to the northeast corner of the state. Generally, north of this line, the snowpack is below average. In this area, warm rains received during early December melted and depleted the median and low elevation snow cover. This caused much flooding, especially in the Willamette Valley.

## PRECIPITATION

Precipitation has been excellent throughout the state during the November-December period. It has ranged from a low of 120% of normal on the Rogue River drainage, up to 180% of normal in the Hood River area.

## SOIL MOISTURE

Soil moisture on mountain watersheds is generally above average, especially where snow melt occurred from the warm rains. However, soils on the Upper Owyhee are still drier than normal.

## RESERVOIR STORAGE

Reservoir storage is generally below normal as of January 1, even with the heavy precipitation received during the past two months. This is due to the heavy use of stored water (and lack of stream-flow) this past summer.

Twenty-three principal irrigation reservoirs are currently storing 1,232,000 acre feet of water. This is 80% of normal and 70% of last year's storage at this time.

## STREAMFLOW

Streamflow during the past three months has been above normal in the northwest half of the state and normal to below normal in the southeast half. This follows the same pattern of the melting snow which occurred from the warm rains in December. Where the snowpack was depleted, streamflow was above average and where this did not occur, streamflow was average to below.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.



# WATER SUPPLY OUTLOOK

## OWYHEE, MALHEUR WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

The water supply outlook is normal for the Owyhee project and below normal elsewhere in Malheur County. The snowpack is near average throughout the area, however, reservoir storage is much below normal. Soil moisture is still below average on the Upper Owyhee in Nevada. Precipitation during November and December was  $1\frac{1}{2}$  times normal.



## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Bully Creek at Warm Springs Malheur near Drewsey Malheur, North Fork at Beulah Owyhee Reservoir net Inflow					
Note: Forecasts begin on Feb. 1, 1978.					

## FORECAST DATE OF LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome		Forecasts begin in the Feb. 1 report which will be issued about Feb. 8, 1978.	

## RESERVOIR STORAGE (Thousand Ac. Ft.)

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Beulah Reservoir	60.0	10.3	21.5	17.8
Bully Creek	30.0	4.9	12.2	10.4
Owyhee	715.0	221.8	469.2	363.2
Warm Springs	191.0	16.1	74.8	65.6

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>c</sup>
Malheur River	1	---	100
Owyhee River	2	---	38

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Jordan Creek	2	---	105
Malheur River	4	2050	120
Owyhee River	3	---	95

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



The water supply outlook varies from average on the Burnt, to below average elsewhere in the area. Early season snow measurement indicates a normal snowpack at high elevations and below average at median and low elevations. Soil moisture is very good right now from the excellent precipitation received during the past several months.





# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average c
Bear near Wallowa Burnt near Hereford Catherine near Union Eagle Creek abv. Skull Creek Grande Ronde at La Grande Hurrican near Joseph Imnaha at Imnaha Lostine near Lostine Powder near Sumpter Wallowa, East Fork near Joseph					
Note: Forecasts begin on Feb. 1, 1978.					

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average c
Unity	25.2	9.0	10.5	7.7
Wallowa Lake	37.5	21.5	24.2	19.9

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average c
Burnt River	3	825	120
Grande Ronde River above La Grande	3	90	75
Wallowa, Imnaha, Catherine Creek	---	---	---
Powder River	2	650	75

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average c
Burnt, Powder	2	---	124
Grande Ronde, Catherine Creek, Imnaha River	2	---	123

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1958-72, adjusted average. (i) 1958-72, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

## WATER SUPPLY OUTLOOK

# UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

## OREGON

## GENERAL OUTLOOK

The water supply outlook for next summer is for below average supplies. The early season snowpack is below average. Reservoir storage is still below average, even with the excellent precipitation received during the past several months. Soil moisture is close to average.

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# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>C</sup>
Birch Creek at Rieth McKay near Pilot Rock Umatilla near Gibbon Umatilla at Pendleton Walla Walla, South Fork near Milton					

Note: Forecasts begin on Feb. 1, 1978.

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton		Forecasts begin in the Feb. 1 report which will be issued about Feb. 8, 1978	

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>C</sup>
Cold Springs	50.0	18.6	9.8	21.6
McKay	73.8	15.2	12.2	18.3

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>C</sup>
Umatilla, Walla Walla, McKay Creek	3	---	98

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>C</sup>
McKay Creek	2	2500	90
Umatilla River	3	1575	85
Walla Walla River	2	1830	90

Water supplies on the John Day should be close to normal next summer. The early season snowpack is near normal and soil moisture is good. Precipitation during the past two months has been 135% of average.



STREAMFLOW FORECASTS					
BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Camas Creek near Ukiah John Day, Middle Fork at Ritter John Day, North Fork at Monument John Day at Prairie City Strawberry near Prairie City					

Note: Forecasts begin on Feb. 1, 1978.

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average c
John Day above Dayville	4	---	117
John Day, North Fork	1	---	106

[illegible]

OR - 4b



# WATER SUPPLY OUTLOOK

## UPPER DESCHUTES, CROOKED WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Water supplies in the Deschutes basin will vary from average to below average. Early season snowpack measurements indicated a below normal snow cover throughout the area. Reservoir storage is near average in Wickiup, Crescent Lake and Crane Prairie, but below normal in the Crooked River basin. Precipitation has been  $1\frac{1}{2}$  times normal during the past two months and as a result soil moisture is now good. Last year's snowpack was minimal and will affect this year's runoff on the Deschutes.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acres Feet	Percent of Average	PERIOD	Last year Average C
Beaver Creek near Paulina Crane Prairie Reservoir total Inflow Crescent at Crescent Lake Crooked near Post Deschutes at Benham Falls Deschutes below Snow Creek Deschutes, Little near La Pine Ochoco Reservoir net Inflow Odell near Crescent Squaw near Sisters Tumalo near Bend				

Note: Forecasts begin on Feb. 1, 1978.

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow Crooked R. near Post Deschutes at Bend Little Deschutes near La Pine		Forecasts begin in the Feb. 1 report which will be issued about Feb. 8, 1978	

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Crane Prairie	55.3	41.3	36.1	38.1
Crescent Lake	86.9	49.9	66.6	42.2
Ochoco	47.5	8.2	24.6	17.5
Prineville	153.0	66.4	92.6	98.5
Wickiup	200.0	126.6	158.0	121.2

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF	
		Last Year	Average C
Crooked R., Upper Deschutes River	1	---	110

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Crooked, Ochoco	1	1600	85
Deschutes abv. Wickiup	1	1140	80
Little Deschutes	2	910	85
Tumalo & Squaw Crs.	2	1165	65

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

HOOD, MILE CREEKS, LOWER DESCHUTES  
WATERSHEDS  
OREGON

## GENERAL OUTLOOK

The potential for below average water supplies next summer currently exists in the Rogue and Umpqua basins. The snowpack varies from 55% at median elevations, up to 100% at the highest elevations. Precipitation the past two months has been excellent and soil moisture is now good.



[illegible]

FORECAST DATE of LOW FLOW VALUES			
FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	Forecasts begin in the Feb. 1 report which will be issued about Feb. 8, 1978.		

RESERVOIR STORAGE (Thousand Ac. Ft.)		END OF MONTH		
RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average
Clear Lake (Wasco)	11.9	2.7	6.9	1.5

RIVER BASIN and or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW- WATER AS PERCENT OF	
		Last Year	Average C
Hood River	2	180	25
Mile Creeks	---	---	---
White River	2	180	25

R-6b



# WATER SUPPLY OUTLOOK

## LOWER COLUMBIA WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Water supplies could be below normal this next summer in the Hood River basin. The early season snowpack is normal at elevations above 5,000 feet but much below normal below this level. Precipitation during the past two months has been 180% of average. However, the rains during early December were warm and much of the snowpack melted and has already run off.





## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Sandy River	1	155	30

## STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>C</sup>
Columbia at The Dalles Sandy River near Marmot	Note: Forecasts begin on Feb. 1, 1978.				

## HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW <sup>a</sup> (1,000 A.F.)			REGULATED PEAK (1,000 cfs)	DATE
	APR - SEPT	APR - JUNE	MAY - JUNE		
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,408	65,112	622	June 10
1968	89,000	55,500	47,900	404	June 13
1969	112,300	85,700	63,800	515	May 15
1970	88,100	62,800	55,200	425	May 28
1971	122,900	88,400	73,700	557	May 13
1972	134,700	96,400	81,400	619	June 20
1958-72 Avg.	104,300	72,900	59,900	529	

## LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 cfs)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year      Average <sup>c</sup>
Clackamas at Estacada Clackamas above Three Lynx McKenzie at McKenzie Bridge McKenzie near Vida McKenzie, So. Fork near Rainbow Oak Grove Fork above Power Intake Row near Dorena Santiam, North at Mehama Santiam, South at Waterloo Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge Willamette, No. Fk. of Mid. Fk. near Oakridge Willamette at Salem				
Note: Forecasts begin on Feb. 1, 1978.				

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Clackamas River	2	800	20
McKenzie River	3	385	35
Row River	2	295	45
Santiam River	4	660	35
Willamette, Mid. Fk.	3	490	55

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

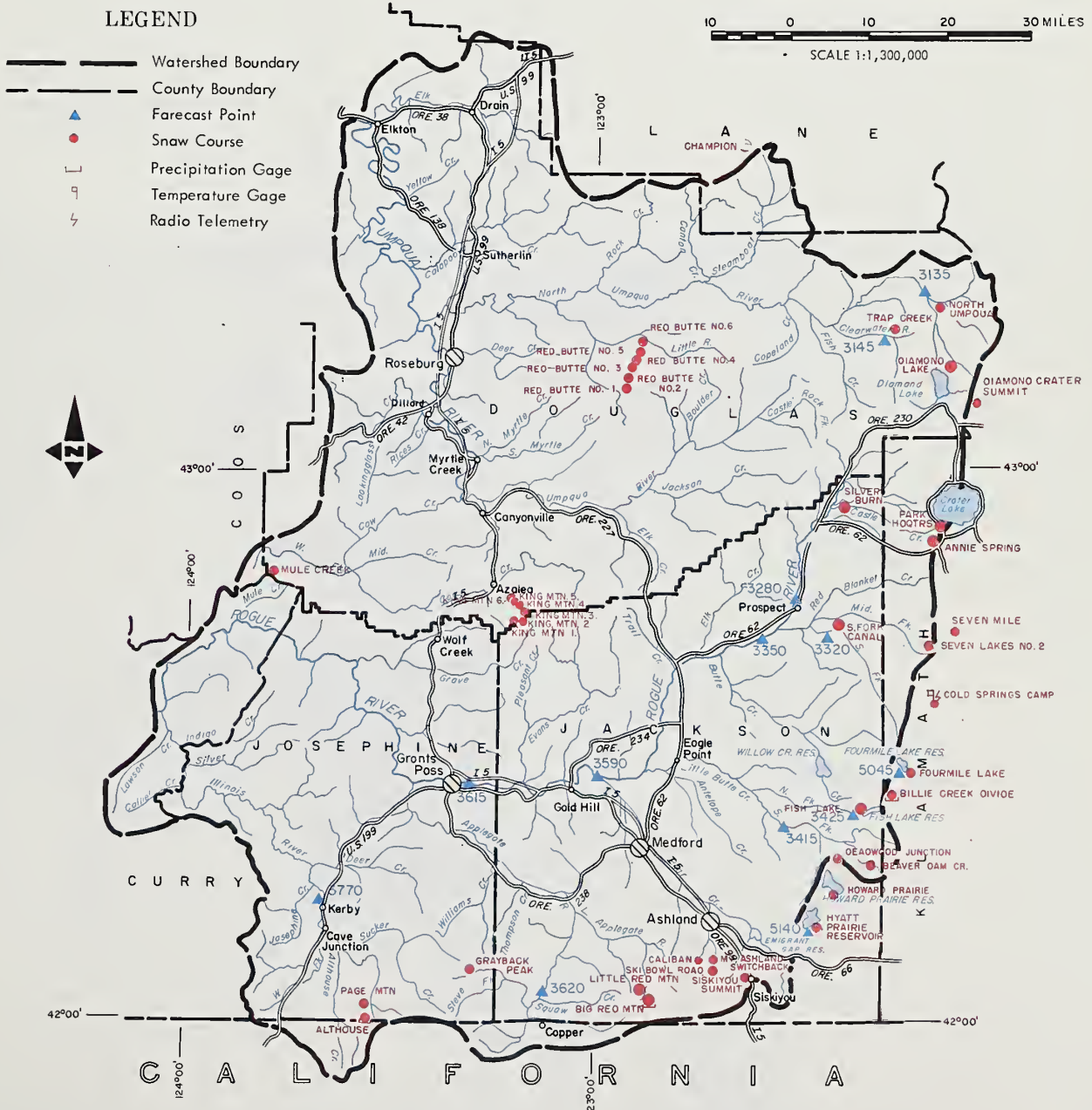
RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Blue River	85.6*	0.2	0.0	--
Cottage Grove	30.0*	0.2	0.0	1.4
Cougar	155.2*	9.0	0.0	14.4 <sup>b</sup>
Detroit	299.9*	51.0	0.0	25.3
Dorena	70.5*	0.5	0.0	6.7
Fall Creek	115.0*	0.9	0.0	0.0 <sup>b</sup>
Fern Ridge	94.2*	3.8	0.0	10.4
Foster	30.0*	0.2	0.0	1.1 <sup>b</sup>
Green Peter	270.0*	55.9	0.0	6.6 <sup>b</sup>
Hills Creek	200.0*	49.0	0.0	15.9 <sup>b</sup>
Lookout Point	337.2*	69.5	0.0	34.4
Timothy Lake	61.7	60.3	39.3	49.1
Henry Hagg Lake	53.0	30.5	22.6	--
*Multiple purpose reservoir--space reserved primarily for flood runoff.				

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



## GENERAL OUTLOOK

The water supply outlook for the Rogue and Umpqua basins is currently below average. The mountain snow cover is 65 to 75 percent of normal. Precipitation has been above average for the past several months and soil moisture is good. Reservoir storage is generally below average.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year      Average C
Applegate near Copper Clearwater above Trap Creek Fourmile Lake net Inflow Hyatt Reservoir net Inflow Illinois River near Kerby Little Butte, N. Fk. at Fish Lake nr. Lake Cr. Little Butte, S. Fk. near Lake Creek Rogue above Prospect Rogue, South Fork near Prospect Rogue at Raygold near Central Point Rogue at Grants Pass Umpqua, No. blw. Lemolo Res. nr. Toketee Falls				

Note: Forecasts begin on Feb. 1, 1978.

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Little Butte Creek South Fork Rogue at Raygold		Forecasts begin in the Feb. 1 report which will be issued about Feb. 8, 1978	

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Emigrant Lake	39.0	22.4	20.1	18.0*
Fish Lake	8.0	4.1	6.2	5.0
Fourmile Lake	16.1	2.9	9.6	7.7
Howard Prairie	60.0	26.3	40.3	35.3
Hyatt Prairie	16.1	8.1	10.0	9.8
*Average for years of record (in base period) after reconstruction.				

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Applegate	---	---	---
Bear Creek	1	240	65
Butte Creek	3	435	70
Illinois River	---	---	---
North Umpqua	3	590	65
Rogue River	3	2400	75

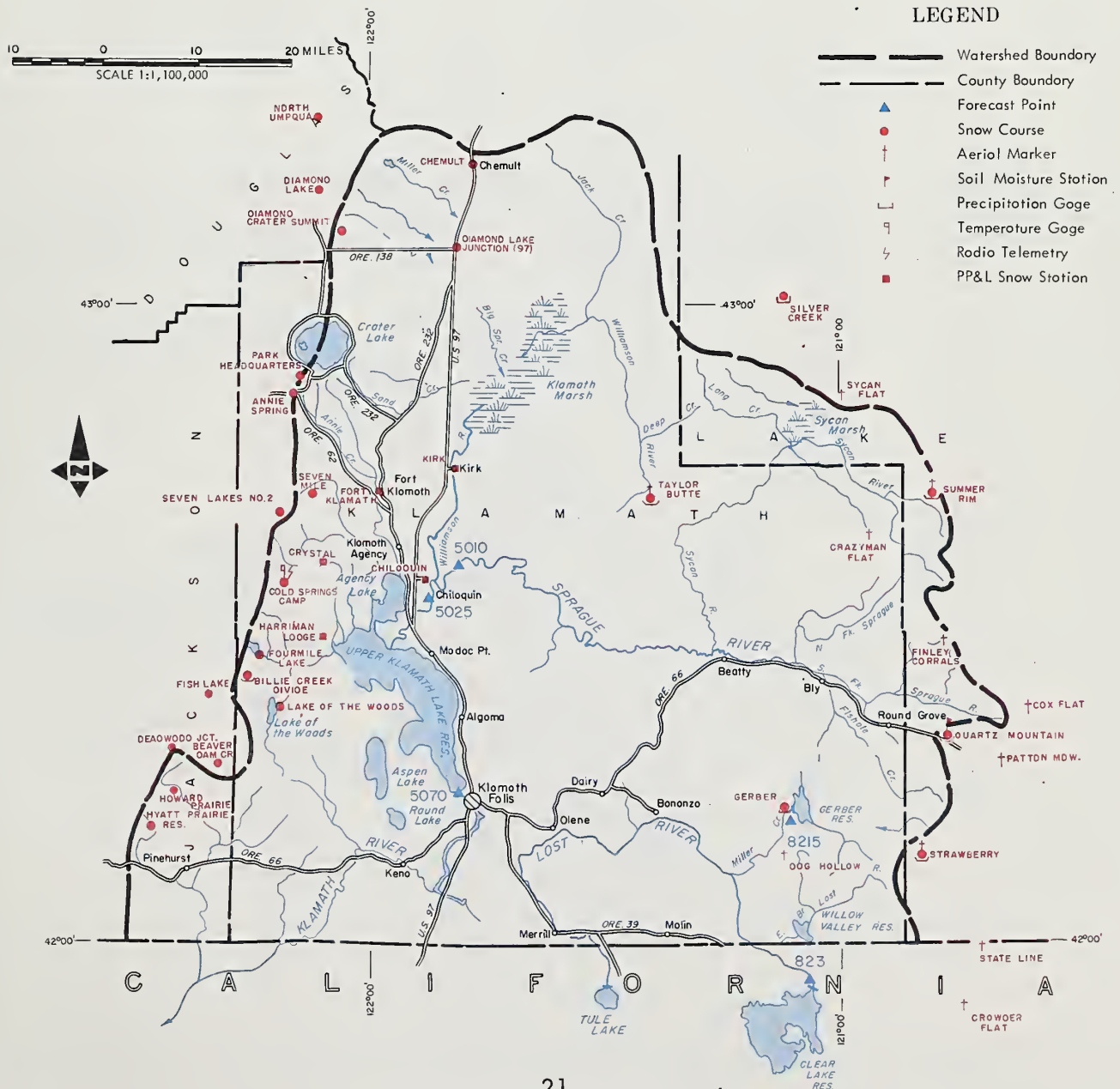
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average (d) Corrected to natural flow. (e) Not scheduled.



# WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

## GENERAL OUTLOOK

Water supplies in Klamath County next summer should be near average. The mountain snowpack is average to above average at most snow measuring sites. Precipitation has been excellent during the past two months and soil moisture is good. Reservoir storage is near average in Klamath Lake and below average in Clear Lake and Gerber.



# STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Clear Lake Reservoir Inflow					
Gerber Reservoir Inflow					
Sprague near Chiloquin					
Upper Klamath Lake net Inflow					
Williamson below Sprague River					
			</		

Note: Forecasts begin on Feb. 1, 1978.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>c</sup>
Upper Klamath	1	---	88

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Clear Lake	440.2	137.0	212.1	188.4
Gerber	94.0	15.5	35.0	37.9
Upper Klamath Lake	584.0	343.0	320.5	341.3

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Lost River	1	---	20
Sprague River	2	640	130
Upper Klamath	5	1465	100
Williamson River	3	205	110

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

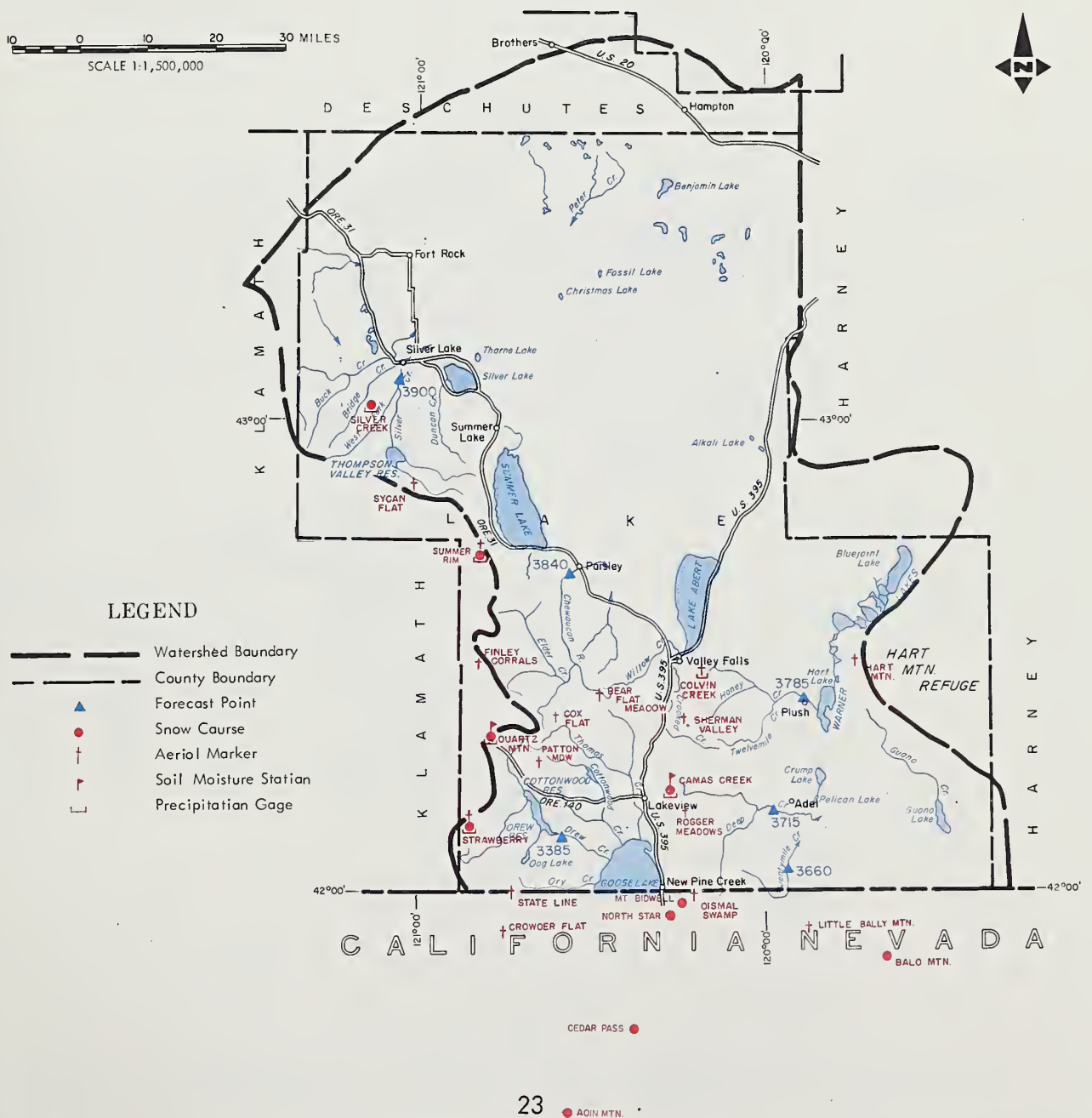
# WATER SUPPLY OUTLOOK

## LAKE COUNTY, GOOSE LAKE WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Lake County should have near average water supplies next summer. The mountain snowpack is near normal. Precipitation has been excellent the past several months and soil moisture is good. Reservoir storage, however, is much below normal.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Chewaucan near Paisley Deep above Adel Drews Reservoir net Inflow Honey Creek near Plush Silver Creek near Silver Lake Twentymile near Adel					

Note: Forecasts begin on Feb. 1, 1978.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Chewaucan, Silver Creek, Drew Creek	1	---	88
Honey, Deep, 20-Mi. Cr.	1	---	104

## RESERVOIR STORAGE (Thousand Ac. Ft.)

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Cottonwood	8.7	No Rpt.	1.3 <sup>a</sup>	2.1 <sup>*b</sup>
Drews	63.0	4.6	21.4 <sup>a</sup>	29.8
Thompson Valley	19.5	No Rpt.	----	----

\* Average for years of record (in base period) after reconstruction.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Chewaucan River	2	640	130
Deep Creek	1	270	95
Drew Creek	1	260	100
Honey Creek	1	270	95
Silver Creek	2	4500	115
Twentymile Creek	---	---	---

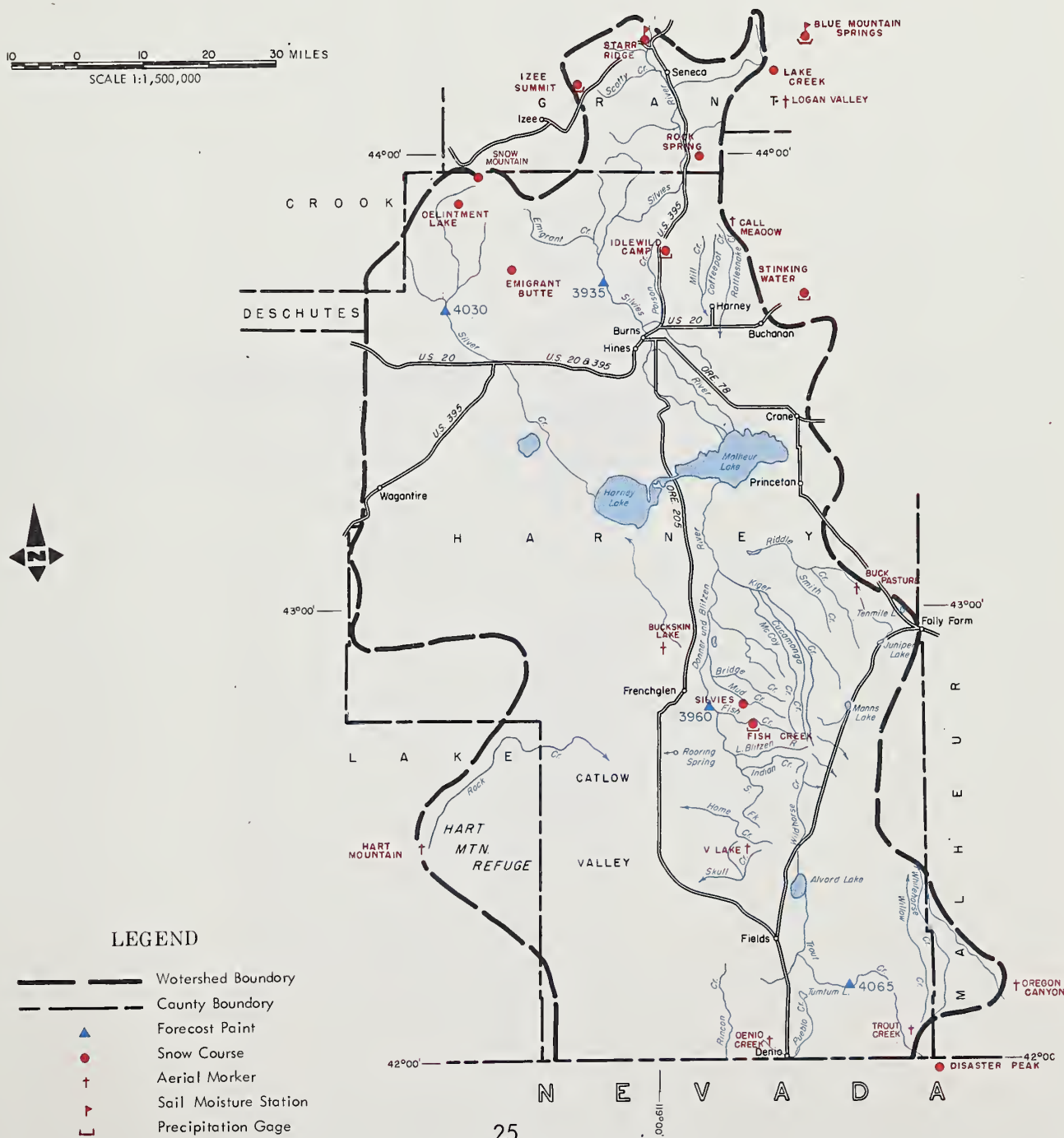
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

## GENERAL OUTLOOK

Water supplies are expected to be near average next summer. Early season snow measurements indicate a near average snowpack. Soil moisture is near average due to the excellent rains received the past several months.





STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Donner und Blitzen near Frenchglen					
Silver near Riley					
Silvies River near Burns					
Trout Creek near Denio					

Note: Forecasts begin on Feb. 1, 1978.

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Silvies River, Silver Cr.	2	---	114

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average
Donner und Blitzen R.	1	---	155
Silver Creek	---	---	---
Silvies River	3	950	115
Trout Creek	---	---	---

OR-12b

# BASIC DATA SUPPLEMENT 1

JANUARY 1, 1978

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont (In.)	Water Content (inches)	
				Last Yr.	Ave C
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)		e			
Battle Creek (Ida.)		e			
Bear Creek (Nev.)	1/3	34	10.2	---	7.8
Big Bend (Nev.)		e		0.0	3.0
Blue Mountain Springs	12/28	26	7.0	0.6	6.1
Blue Mountain Spgs. Pillow	12/28	27	6.0	0.4	---
Buck Pasture***		e			
Buckskin, Lower (Nev.)		e			
Buckskin, Upper (Nev.)		e			
Bull Basin (Ida.)		e			
Bully Creek***		e			
Call Meadow***		e			
Columbia Basin (Nev.)	12/26	9	2.2	0.0	---
Cottonwood-Indian***		e			
Disaster Peak (Nev.)		e			
Eldorado Pass	12/28	6	1.8	0.0	1.7
Fawn Creek (Nev.)	12/29	12	2.9	0.0	---
Fish Creek		e			
Fish Creek***		e			
Fish Creek Pillow*		e			
Flag Prairie***		e			
Fox Creek (Nev.)		e			
Fry Canyon (Nev.)	12/29	8	1.3	0.0	3.0
Gold Creek (Nev.)		e		0.0	1.9
Granite Peak (Nev.)		e			
Hyde Pasture (Ida.)		e			
Jack Creek, Lower (Nev.)		e			
Jack Creek, Upper (Nev.)	12/26	9	2.2	0.0	---
Jack Peak (Nev.)		e			
Lake Creek R.S.	12/28	17	5.0	0.1	3.8
Lake Creek R.S. Pillow	12/28	18	5.0	---	---
Laurel Draw (Nev.)		e			
Logan Valley***		e			
Lookout Butte***		e			
Louse Canyon***		e			
Martin Creek (Nev.)		e			
Merritt Mountain (Nev.)	12/26	24	4.1	---	---
Midas (Nev.)	12/26	11	2.1	---	---
Mud Flat (Ida.)		e			
Oregon Canyon***		e			
Quinn Ridge (Nev.)		e			
Red Canyon (Ida.)		e			
Rock Spring	12/28	8	2.6	0.1	---
Rodeo Flat (Nev.)	12/29	6	1.5	0.0	1.8
76 Creek (Nev.)	1/3	24	6.7	---	2.6
Silver City (Ida.)	12/29	20	5.3	0.0	5.6
Silver City (Ida.)***		e			
Silvies		e			
Silvies***		e			
Silvies Pillow*		e			
South Mountain #2 (Ida.)	12/31	21	5.6	0.0	3.9
Stag Mountain (Nev.)	12/26	13	2.2	---	---
Stinking Water	12/30	10	2.2	0.0	1.4
Succor Creek (Ida.)		e			
Taylor Canyon (Nev.)	12/30	9	1.7	0.0	1.8
Toe Jam (Nev.)	12/26	12	2.3	---	---
Tremewan Ranch (Nev.)	12/29	5	0.8	---	0.8
Triangle (Ida.)		e			
Trout Creek***		e			
"V" Lake		e			
Vaught Ranch (Ida.)		e			
War Eagle (Ida.)		e			

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave <sup>c</sup>
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1		e			
Aneroid Lake #2		e			
Anthony Lake	12/27	44	12.1	1.4	11.0
Bald Mountain (Ore.)***		e			
Beaver Reservoir	1/4	22	3.8	0.1	5.4 <sup>b</sup>
Big Sheep***		e			
Blue Mtn. Summit	1/6	16	3.8	0.6	3.3
Bourne		e			
Bourne Pillow*		e			
County Line	12/29	6	1.2	0.3	2.2
County Line Pillow	12/29	6	1.3	---	---
Dooley Mountain	12/28	10	2.2	0.4	3.8
Eilertson Meadows	1/6	22	4.8	0.6	4.7
Eilertson Meadows Pillow	1/6	21	3.7	---	---
Eldorado Pass	12/28	6	1.8	0.0	1.7
Gold Center	1/6	28	6.3	---	---
Gold Center Pillow	1/6	27	5.5	---	---
Goodrich Lake		e			
Little Alps	12/27	18	4.1	0.6	5.5 <sup>b</sup>
Little Antone	12/27	10	2.7	0.5	4.1
Little Antone Alternate	12/27	8	1.9	0.7	---
Lucky Strike	1/4	20	3.1	0.1	---
Lucky Strike Pillow	1/4	17	4.2	---	---
Meacham	1/4	14	3.2	0.1	3.3
Mirror Lake***		e			
Moss Spring		e			
Schneider Meadow		e			
Schoolmarm	12/29	6	1.0	0.2	1.9
Standley***		e			
Taylor Green		e			
Tipton	1/6	25	5.7	0.8	4.2
Tipton Snow Pillow	1/6	33	7.7	---	---
Tollgate	1/4	30	7.6	0.6	8.9
TV Ridge***		e			
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	1/4	17	3.0	0.1	---
Arbuckle Mtn. Pillow*	1/4	--	7.9	---	---
Blue Mountain Camp	1/4	21	4.7	0.1	5.5 <sup>b</sup>
Bowman Springs	1/4	17	3.0	0.5	---
Bowman Springs Pillow*	1/4	--	3.8	---	---
Butte Creek Summit	1/3	9	1.9	0.0	---
Emigrant Springs	1/4	13	2.7	0.1	2.4
High Ridge Pillow*	12/28	--	8.8	---	---
Lucky Strike	1/4	20	3.1	0.1	---
Lucky Strike Pillow	1/4	17	4.2	---	---
Meacham	1/4	14	3.2	0.1	3.3
Tollgate	1/4	30	7.6	0.6	8.9

# BASIC DATA SUPPLEMENT 1

JANUARY 1, 1978

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. C

UPPER JOHN DAY WATERSHEDS					
Anthony Lake	12/27	44	12.1	1.4	11.0
Arbuckle Mountain	1/4	17	3.0	0.1	---
Arbuckle Mt. Pillow*	1/4	---	7.9	---	---
Blue Mountain Springs	12/28	26	7.0	0.6	6.1
Blue Mt. Springs Pillow	12/28	27	6.0	0.4	---
Blue Mountain Summit	1/6	16	3.8	0.6	3.3
Butte Creek Summit	1/3	9	1.9	0.0	---
Derr		e			
Derr Pillow*		e			
Gold Center	1/6	28	6.3	---	---
Gold Center Pillow	1/6	27	5.5	---	---
Indian Creek Butte***		e			
Izee Summit	12/28	9	2.8	0.6	3.0
Lucky Strike	1/4	20	3.1	0.1	---
Lucky Strike Pillow	1/4	17	4.2	---	---
Marks Creek	12/28	6	1.6	0.1	1.9
Ochoco Meadows		e			
Ochoco Meadows Pillow*		e			
Olive Lake***		e			
Schoolmarm	12/29	6	1.0	0.2	1.9
Snow Mountain		e			
Snow Mt. Pillow*		e			
Snow Mt. Pillow**	12/30	---	3.1	1.0	---
Starr Ridge	12/29	7	1.9	0.1	2.2
Tipton	1/6	25	5.7	0.8	4.2
Tipton Snow Pillow	1/6	33	7.7	---	---

### UPPER DESCHUTES, CROOKED WATERSHEDS

Bald Peter	12/28	37	10.6	---	---
Caldwell Ranch		e			
Cascade Summit	12/29	29	8.0	1.3	10.7
Chemult Alternate	12/28	19	4.8	0.1	---
Derr		e			
Derr Pillow*		e			
Hogg Pass	12/29	26	6.5	1.6	14.5
Hogg Pass Pillow*	12/29	---	6.6	---	---
Hungry Flat	12/27	5	1.5	0.0	3.5
Irish-Taylor Pillow**	12/29	---	1.0	0.4	---
Lionshead***		NO	RPT.	---	---
Marks Creek	12/28	6	1.6	0.1	1.9
New Crescent Lake		e			
New Dutchman Flat #2	12/27	50	18.3	1.6	22.3
Ochoco Meadows		e			
Ochoco Meadows Pillow*		e			
Racing Creek	12/28	8	2.2	1.5	---
Snow Mountain		e			
Snow Mountain Pillow*		e			
Snow Mountain Pillow**	12/30	---	3.1	1.0	---
Summit Lake		e		0.0	---
Summit Lake Pillow**		NO	RPT.	1.5	---
Tamarack		e			
Tangent	12/27	24	7.1	0.1	8.4 <sup>b</sup>
Three Creek Butte		e			
Three Creek Meadow		e			
Three Creek Mdw. Pillow**		e			
Waldo Lake		e			
Whitewater Meadow		NO	RPT.	2.2	---

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. C

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadows		e			
Clear Lake	12/28	10	0.6	0.1	3.4
Clear Lake (Experimental)	12/28	6	1.8	0.6	5.4 <sup>b</sup>
Greenpoint		e			
Knebal Springs		e			
Mt. Hood Test Site**	12/30	---	19.1	---	22.9
Mud Ridge Pillow*	12/28	---	2.6	---	---
Red Hill		e			
Red Hill Pillow*		e			
Still Creek	12/28	8	2.5	1.6	7.9
Switchback		e			
Tilly Jane		e			
Ulrich Ranch Junction		e			
Umbrella Falls		e			
WILLAMETTE WATERSHEDS					
Cascade Summit	12/29	29	8.0	1.3	10.7
Champion	12/29	19	5.9	1.9	11.2 <sup>b</sup>
Clackamas Lake		e			
Clear Lake	12/28	10	0.6	0.1	3.4
Clear Lake (Expt.)	12/28	6	1.8	0.6	5.4 <sup>b</sup>
Dead Horse Grade	1/9	4	1.4	0.1	6.4
Detroit (Town)	12/28	0	0.0	0.0	1.0
Detroit Dam	12/28	0	0.0	0.0	0.5
Golden Curry Creek	12/29	0	0.0	0.0	2.3
Hogg Pass	12/29	26	6.5	1.6	14.5
Hogg Pass Pillow*	12/29	---	6.6	---	---
Lake Harriet		NO	RPT.	---	1.1
Laurel Mountain	12/29	0	0.0	0.0	---
Layng Creek	12/29	0	0.0	0.0	0.1
Lookout Point Dam	12/29	0	0.0	0.0	0.0 <sup>b</sup>
Lost Creek Ranch	12/28	0	0.0	0.0	2.0
Lund Park	12/29	0	0.0	0.0	0.1 <sup>b</sup>
Marion Forks	12/29	6	1.5	0.0	4.7 <sup>b</sup>
Marion Forks Pillow*	12/29	---	0.9	---	---
Marys Peak		e			
McCredie Springs	12/29	0	0.0	0.0	0.5 <sup>b</sup>
McKenzie	1/9	39	11.9	2.4	17.8
McKenzie Bridge	12/28	0	0.0	0.0	0.6
Mill City	12/28	0	0.0	0.0	0.2
Mt. Hood Test Site**	12/30	---	19.1	---	22.9
Oakridge	12/29	0	0.0	0.0	0.0 <sup>b</sup>
Peavine Ridge Pillow**	1/5	---	1.0	---	5.7 <sup>b</sup>
Railroad Overpass	12/29	0	0.0	0.0	0.8 <sup>b</sup>
Saddle Mountain Pillow**		NO	RPT.	---	---
Salt Creek Falls	12/29	6	1.3	0.6	5.2
Santiam Junction	12/29	14	3.1	0.1	8.6 <sup>b</sup>
Santiam Junction Pillow*	12/29	---	3.4	---	---
Seine Creek Pillow**	12/29	---	0.1	0.4	---
Still Creek	12/28	8	2.5	1.6	7.9
Summit Lake		e			0.0
Summit Lake Pillow**		NO	RPT.	1.5	---
Timothy Lake	1/6	10	2.8	---	6.3
Valsetz Summit	12/29	0	0.0	0.0	---
Vida	12/28	e0	0.0	0.0	0.2
Waldo Lake					
Weaver Creek	12/29	0	0.0	0.0	0.4
White Branch Slide	12/28	T	0.1	0.0	3.1
Whitewater Bridge	12/28	T	0.1	0.0	2.3 <sup>b</sup>



# BASIC DATA SUPPLEMENT 1

JANUARY 1, 1978

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C

ROGUE, UMPQUA WATERSHEDS					
Althouse		e			
Annie Spring	12/29	53	16.2	2.0	16.3
Beaver Dam Creek	12/31	14	4.1	0.1	6.6
Big Red Mountain		e			
Billie Creek Divide	12/28	28	7.8	0.1	8.7 <sup>b</sup>
Billie Creek Divide Pillow*	12/28	--	6.4	---	---
Caliban		e			
Caliban (Alternate)		e			
Champion	12/29	19	5.9	1.9	11.2 <sup>b</sup>
Cold Springs Camp		e			
Deadwood Junction	12/31	10	2.1	0.1	4.0 <sup>b</sup>
Diamond-Crater Summit	12/29	39	12.1	1.0	11.3 <sup>b</sup>
Diamond Lake	12/29	20	5.9	0.6	7.6
Fish Lake	12/29	15	4.7	0.1	5.6 <sup>b</sup>
Fourmile Lake		e			
Fourmile Lake Pillow*		e			
Grayback Peak		e			
Howard Prairie Reservoir	12/31	13	4.5	0.1	3.9 <sup>b</sup>
Hyatt Prairie	12/31	2	0.5 <sup>a</sup>	0.1	3.7
King Mountain #1	12/29	8	3.1	0.0	8.3
King Mountain #2	12/29	2	3.6	0.0	6.5
King Mountain #3	12/29	0	0.0	0.0	3.4
King Mountain #4	12/29	0	0.0	0.0	0.2
King Mountain #5	12/29	0	0.0	0.0	0.0
King Mountain #6	12/29	0	0.0	0.0	0.0
Little Red Mountain		e			
Mt. Ashland Switchback		e			
Mule Creek	12/29	T	0.1	0.0	---
North Umpqua	12/30	13	3.7	0.7	6.0
Page Mountain		e			
Park Headquarters	12/29	69	20.0	2.3	23.3
Red Butte #1	12/28	6	1.7	0.0	6.5
Red Butte #2	12/28	5	1.8	0.0	4.0
Red Butte #3	12/28	0	0.0	0.0	2.8
Red Butte #4	12/28	0	0.0	0.0	1.8
Red Butte #5	12/28	0	0.0	0.0	2.2
Red Butte #6	12/28	0	0.0	0.0	0.6
Seven Mile		e			
Silver Burn	12/30	13	3.1	0.0	5.6
Siskiyou Summit	12/28	6	2.4	0.1	3.7 <sup>b</sup>
Ski Bowl Road		e			
South Fork Canal	12/30	2	0.5	0.0	2.1
Trap Creek	12/30	9	2.8	0.8	5.2 <sup>b</sup>

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C

KLAMATH WATERSHEDS					
Annie Spring	12/29	53	16.2	2.0	16.3
Billie Creek Divide	12/28	28	7.8	0.1	8.7 <sup>b</sup>
Billie Creek Divide Pillow*	12/28	--	6.4	---	---
Chemult (Alternate)	12/28	19	4.8	0.1	---
Chiloquin (PP&L)		NO	RPT.	---	0.6
Cold Springs Camp		e			
Crazyman Flat***		e			
Crowder Flat (Calif.)		e			
Crystal (PP&L)	1/3	10	2.6	---	3.9
Diamond-Crater Summit	12/29	39	12.1	1.0	11.3 <sup>b</sup>
Dog Hollow***		e			
Finley Corrales***		e			
Fort Klamath (PP&L)	1/3	12	2.4	---	1.7
Fourmile Lake		e			
Fourmile Lake Pillow*		e			
Gerber	12/15	2	0.2	0.0	1.1 <sup>b</sup>
Harriman (PP&L)	1/3	10	2.4	---	1.8
Howard Prairie	12/31	13	4.5	0.1	3.9 <sup>b</sup>
Hyatt Prairie Reservoir	12/31	2	0.5	0.1	3.7
Kirk (PP&L)	1/3	14	3.8	---	3.3
Park Headquarters	12/29	69	20.0	2.3	23.3
Quartz Mountain	12/28	13	2.6	0.9	2.6
Seven Mile		e			
Seven Mile Pillow*		e			
State Line (Calif.)		e			
Strawberry		e			
Strawberry***		e			
Summer Rim		e			
Summer Rim***		e			
Summer Rim Pillow*		e			
Sycan Flat***		e			
Taylor Butte	12/28	17	3.8	1.0	2.3 <sup>b</sup>
Taylor Butte Pillow	12/28	19	5.0	---	---

## LAKE COUNTY, GOOSE LAKE WATERSHEDS

Adin Mountain (Calif)		e			
Bald Mountain (Nev.)		e			
Bear Flat Meadow***		e			
Camas Creek	12/30	14	3.8	1.4	4.1
Cedar Pass (Calif.)	12/30	19	4.9	---	---
Colvin Creek***		e			
Cox Flat***		e			
Crowder Flat (Calif.)		e			
Dismal Swamp (Calif.)		e			
Finley Corrales***		e			
Hart Mountain***		e			
Little Bally Mtn. (Nev.)		e			
Mt. Bidwell (Calif.)		e			
North Star (Calif.)		e			
Patton Meadows***		e			
Quartz Mountain	12/28	13	2.6	0.9	2.6
Rogger Meadows***		e			
Sherman Valley***		e			
Silver Creek	12/26	4	0.7	0.4	1.5
State Line (Calif.)		e			
Strawberry		e			
Strawberry***		e			
Summer Rim		e			
Summer Rim***		e			
Summer Rim Pillow*		e			
Sycan Flat***		e			

JANUARY 1, 1978

## SNOW

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# BASIC DATA SUPPLEMENT 2

JANUARY 1, 1978

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average <sup>c</sup>
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8			---	---
Big Bend (Nev.)	6700	48	16.7			---	---
Blue Mountain Spring	5900	42	16.9	12/28	9.0	5.8	---
Mud Flat (Ida.)	5500	48	12.8			---	---
Rodeo Flat (Nev.)	6800	42	11.0	12/29	4.0	---	---
Taylor Canyon (Nev.)	6200	48	15.1	12/30	9.4	---	---
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8			8.4	8.7
Dooley Mountain	5430	36	9.2	12/28	3.3	2.6	4.0
Emigrant Springs	3925	48	22.3	1/4	19.3	17.7	---
Ladd Summit	3730	48	18.9	12/27	10.8	8.9	10.0
Moss Springs	5850	36	25.8			---	---
Tollgate	5070	48	23.6	1/4	16.3	---	---
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	12/30	12.4	9.2	11.7
Emigrant Springs	3925	48	22.3	1/4	19.3	17.7	---
Tollgate	5070	48	23.6	1/4	16.3	---	---
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	12/30	12.4	9.2	11.7
Blue Mountain Spring	5900	42	16.9	12/28	9.0	5.8	---
Blue Mountain Summit	5100	36	16.8			8.4	8.7
Derr	5670	24	9.0			---	---
Marks Creek	4540	36	14.1	12/28	11.2	9.5	---
Snow Mountain	6300	48	16.7			---	---
Starr Ridge	5150	36	10.6	12/29	10.5	7.9	---
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0			---	---
Marks Creek	4540	36	14.1	12/28	11.2	9.5	---
Snow Mountain	6300	48	16.7			---	---
KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	12/28	7.6	5.8	8.6
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	12/30	12.4	10.1	11.9
Quartz Mountain	5230	48	15.3	12/28	15.0	5.8	8.6
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	12/28	9.0	5.8	---
Silvies	6900	48	16.4			---	---
Snow Mountain	6300	48	16.7			---	---
Starr Ridge	5150	36	10.6	12/29	10.5	7.9	---
Willow-Bald	5000	24	6.6	1/4	5.1	---	---
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.							

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

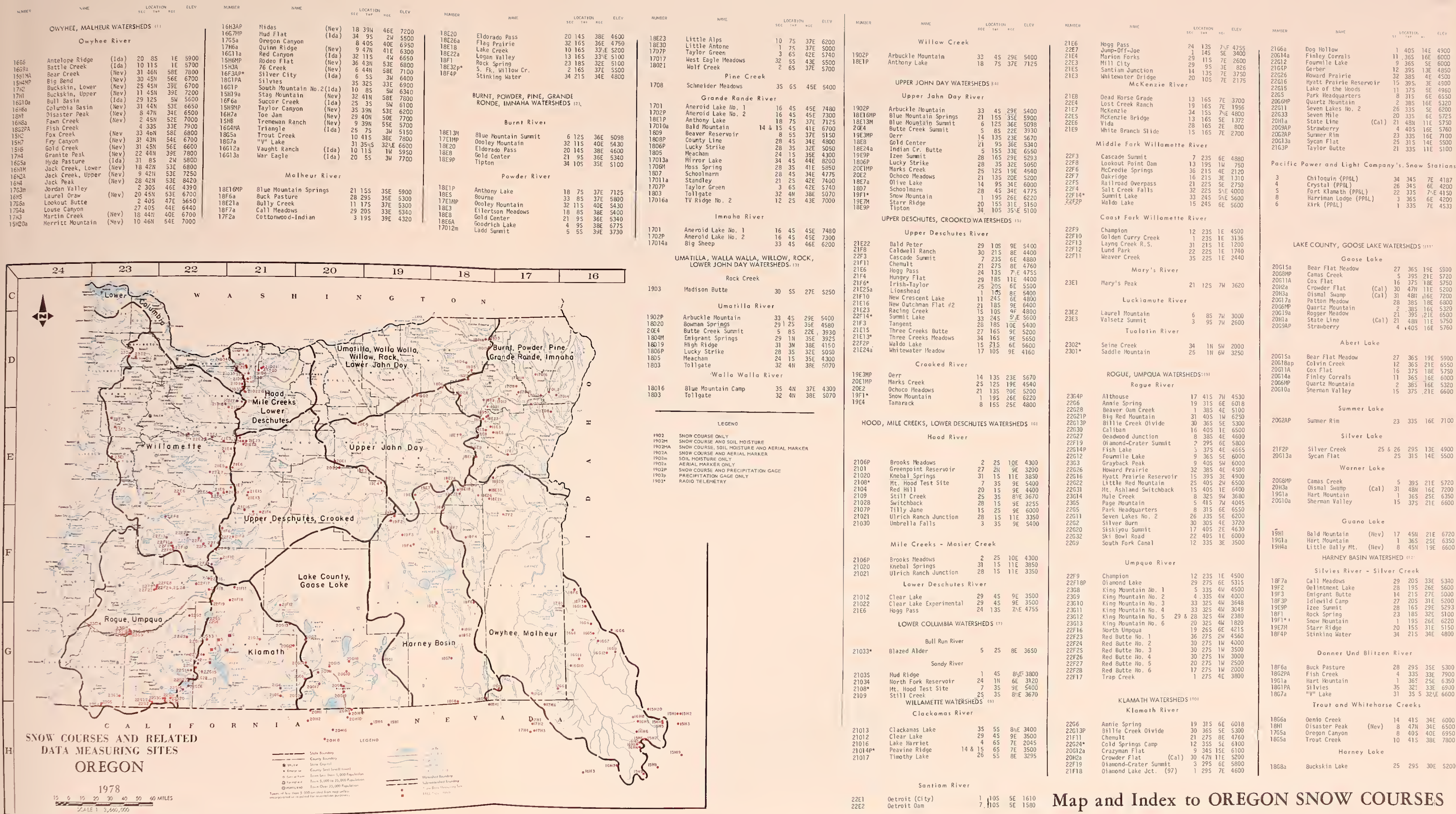
# BASIC DATA SUPPLEMENT 3

JANUARY 1, 1978

## PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average <sup>c</sup>
Billie Creek Divide (Jackson County)	5310	From 7/27 to 12/28	25.66"	4.40	---
Blue Mt. Springs (Grant County)	5900	From 9/30 to 12/28	13.31"	6.20	---
Camas Creek (Lake County)	5825	From 12/1 to 12/30	6.75"	2.15	---
County Line (Umatilla County--Starkey Hdqs.)	4800	From 10/31 to 12/29	6.75"	0.00	---
Lucky Strike (Umatilla County)	5050	From 6/21 to 1/4/78	25.58"	---	---
Marks Creek (Crook-Wheeler Cos.)	4540	From 11/30 to 12/28	4.80"	0.20	---
Mt. Hood Test Site (Clackamas County)	5555	From 10/28 to 12/21	53.76"	---	---
Quartz Mt. Summit (Lake County)	6300	From 11/28 to 12/28	5.45"	0.25	---
Taylor Butte (Klamath County)	5040	From 11/3 to 12/28	5.40"	---	---
<p>(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average (d) Corrected to natural flow. (e) Not scheduled.</p>					











## The Following Organizations Cooperate in the Oregon Snow Survey Work

### STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon Department Of Water Resources
- Sail and Water Conservation Districts of Oregon

### COUNTY

- Douglas County Water Resources Survey

### FEDERAL

- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - NOAA, National Weather Service
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
- Department of National Defense
  - Corps of Army Engineers

### PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

### MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

### IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale - Oregon Irrigation District
- Warm Springs Irrigation District

### PRIVATE ORGANIZATIONS

- The Crag Rats, Hood River, Oregon

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